CLAIMS

- 1 A process for the preparation of 1,1,1,3,3-pentafluoropropane, according to which 1,1,1,3,3-pentachloropropane is reacted with hydrogen fluoride in the presence of a hydrofluorination catalyst.
- 5 2 The process of Claim 1, wherein the reaction is carried out continuously in a liquid phase with a molar ratio of the catalyst to 1,1,1,3,3-pentachloropropane maintained from 0.001 to 1000.
 - 3 The process of claim 2, wherein the molar ratio of the catalyst to 1,1,1,3,3-pentachloropropane is maintained superior to 0.5.
- 4 The process of Claim 2, wherein the reaction is carried out at a temperature and under a pressure at which 1,1,1,3,3-pentafluoropropane is gaseous and wherein 1,1,1,3,3-pentafluoropropane and hydrogen chloride are drawn off in a gaseous phase as they are being formed.
- 5 The process of Claim 2, wherein the hydrofluorination catalyst is chosen from tin and antimony chlorides, fluorides and chlorofluorides.
 - 6 The process of Claim 2, wherein the catalyst used is antimony pentachloride.
 - 7 The process of Claim 2, wherein from 5 to 100 moles of hydrogen fluoride are used per mole of 1,1,1,3,3-pentachloropropane.
- 8 The process of Claim 2, wherein the reaction is carried out at a temperature of approximately 50 to 150°C and at a pressure of 2 to 40 bar.
 - 9 The process of Claim 2, wherein the 1,1,1,3,3-pentachloropropane used is prepared by reaction between vinyl chloride and tetrachloromethane.
 - 10 A process for the preparation of 1,1,1,3,3-pentachloropropane usable especially for preparing 1,1,1,3,3-pentafluoropropane, in which vinyl chloride and tetrachloromethane are reacted continuously in the presence of a telomerization catalyst chosen from copper compounds.

25

- 11 The process of Claim 10, wherein the reaction is operated in a reaction mixture in which the molar ratio of the catalyst to vinyl chloride is maintained from 0.001 to 1000.
- 12 The process of Claim 10, wherein the reaction is operated in a reaction
 mixture in which the molar ratio of tetrachloromethane to vinyl chloride is maintained from 1.5 to 1000.
 - 13 The process of Claim 10, wherein the telomerization catalyst is an organic copper compound.
- 14 The process of Claim 10, wherein the telomerization catalyst is a copper chloride, preferably copper(I) chloride.
 - 15 The process of Claim 10, wherein the telomerization reaction is carried out in the presence of a solvent.
 - 16 The process of Claim 15, wherein the solvent is a nitrile, preferably acetonitrile or propionitrile.
- 15 17 The process of Claim 10, wherein the telomerization reaction is carried out in the presence of a co-catalyst.
 - 18 The process of Claim 17, wherein the co-catalyst is an amine.